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## Department of Toxic Substances Control

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Arnold Schwarzenegger  
Governor

April 21, 2005

Commanding Officer  
Department of the Navy  
Naval Facilities Engineering Command  
Southwest Division  
Mr. Patrick Brooks  
1220 Pacific Highway  
San Diego, California 92132-5190

DRAFT PROJECT WORKPLAN FOR THE PCB HOT SPOT SOIL EXCAVATION SITE  
PARCELS E AND E-2, HUNTERS POINT SHIPYARD, SAN FRANCISCO,  
CALIFORNIA, DATED FEBRUARY 25, 2005

Dear Mr. Brooks:

Thank you for the opportunity to review the Draft Project Workplan for the PCB Hot Spot Soil Excavation Site Parcels E and E-2. DTSC comments raise several concerns including the post action characterization of contaminants left in place and the control and monitoring of air emissions from the excavation. Also attached to this letter are the comments of the State of California Department of Health Services.

If you have any questions regarding this letter, please contact me at 510-540-3776.

Sincerely,

Thomas P. Lanphar  
Senior Hazardous Substance Scientist  
Office of Military Facilities

cc: See next page.

Mr. Patrick Brooks  
April 21, 2005  
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cc: Mr. Michael Work  
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Department of Toxic Substances Control Comments on the  
Draft Project Workplan for the PCB Hot Spot Soil Excavation Site Parcels E and E-2,  
Hunters Point Shipyard, San Francisco, dated February 25, 2005  
April 21, 2005

1. Section 3.1 Regulatory Process

Please include a definition of a Time Critical Removal Action (TCRA) and its role and place in the CERCLA process (i.e. an interim action prior to a Feasibility Study and Record of Decision). Include a description of the authority the Navy is taking in conducting this removal action. Please include in the discussion the responsibilities of the regulatory agencies in a TCRA at Hunters Point Shipyard.

OK

2. Section 3.2 Removal Action Objectives

Time Critical Removal Actions are interim actions and many questions must still be answered before the "final remedy" for this site is selected. Please delete the sentence, "Meeting the specified chemical cleanup goals and RROs for the area will constitute a final remedy for PCB, petroleum hydrocarbon, and radioactive contamination within the PCB hot spot area."

OK

3. Section 3.2 Removal Action Objectives and Table 3-1 Chemical Cleanup Goals

DTSC has discussed TPH cleanup goals with the RWQCB and our understanding is that the Petroleum Corrective Action Plan cleanup goal for petroleum is 3,500 mg/kg for total petroleum. The TCRA identifies 3,500 mg/kg total extractable petroleum hydrocarbons as the goal. Please resolve this discrepancy or provide support for limiting the TPH cleanup goal to TPH extractable.

OK

4. Section 3.4 Applicable or Relevant and Appropriate Requirements

Asbestos is an industrial waste at Hunters Point Shipyard and is a common component of serpentinite rock and fill. The Air Resources Board (ARB) regulations on asbestos apply to any construction activities in serpentinite or ultramafic rocks or soils, including the PCB removal action. Monitoring, sampling and dust control activities are required. The regulations are found at:  
<http://www.arb.ca.gov/toxics/atcm/asb2atcm.htm>

OK

5. Figure 2-1

In order to understand the relationship of PCB and TPH contamination, please include TPH data on figure 2-1.

OK

6. Section 5.8 Identification and Removal of Radioactive Material (Sandblast grit)

Sandblast grit is known to be present at the PCB Hot Spot area. Identifying and characterizing the sandblast grit encountered during the removal action is important information for making a final remedial decision for this area. Please include methods for identifying sandblast grit (black and other) and describe sampling that will be conducted in sandblast grit areas. Please include chemical as well as

OK  
S.B.  
probably  
limited to  
waste  
char

radiological sampling of sandblast grit. DTSC recommends that any contaminated sandblast grit be removed during this removal action.

7. Section 5.8 Identification and Removal of Radioactive Material and Figure 6.1

Please include on figure 6.1 truck routes for radiologically contaminated soils and debris from the excavation area to building 406. OK

8. Section 5.10 Pre-Excavation PCB Characterization Sampling

Two samples (0-6 inches and 30-36 inches below ground surface) are proposed for each sample location. The Workplan does not propose pre-excavation characterization or post excavation confirmation sampling (if removal action criteria are met) below 3 feet. Without this data, DTSC will be unable to conclude whether the PCB and TPH removal action goals have been met in areas where the excavation has not progressed to 10 feet. This data gap could be addressed two ways. First is to include pre-excavation characterization sampling to 10 feet bgs, or conduct post-excavation confirmation sampling to 10 feet bgs. (See next comment.) OK

9. Section 5.13 PCB Hot Spot Soil Excavation and Removal of Additional Radioactive Materials

According to the Workplan if removal action goals are met within the first three feet of the excavation no further excavation will occur. Excavation beyond 3 feet will occur if TPH contamination greater than 3,500 mg/kg, PCB concentration greater than 100 mg/kg, and/or radioactive contamination greater than the RROs are present. This methodology could produce a scenario where cleanup goals are met at or above 3 feet but contamination existing at depth is not recognized. This scenario is possible given the history of the site as a waste oil disposal area. In order to avoid this scenario, DTSC requests that when cleanup goals are met at depths less than seven and one-half feet the soil below is sampled in two and one-half foot increments to a depth of 10 feet. Field immunoassay analysis (with 10 percent laboratory confirmation) is acceptable for this sampling. Please propose a sampling methodology that is consistent with DTSC's request.

10. Section 5.13 PCB Hot Spot Soil Excavation and Removal of Additional Radioactive Materials

The proposed excavation boundary does not enclose all locations with PCB greater than 1 mg/kg. High concentrations exist outside the excavation boundary as shown on Figure 5-2. For example, 150 mg/kg was measured at IR02TA07B (3.93 feet) and 37 mg/kg was measured at IR12B042 (1.77 feet). The area between the planned excavation and these locations is not characterized. Potentially the excavation could extend to this area. Please describe how the Navy will respond if cleanup goals are not met and the excavation extends beyond what is currently expected. How will the decision to end removal action activities be made?

11. Section 5.13 PCB Hot Spot Soil Excavation and Removal of Additional Radioactive Materials

The water table at this site may be encountered above ten feet and contamination might exist below the water table. Will contaminants, including TPH, below the water table be left in place?

12. Section 5.14 Post-Excavation Sampling

Because this action is being taken prior to a final risk assessment and Feasibility Study, DTSC is especially interested in post-excavation sampling being conducted in a way that horizontally and vertically characterizes the remaining contamination. As discussed in earlier comments the Navy's proposed pre and post excavation sampling will likely not characterize the site to a depth of 10 feet. Also, the presence of PCB contaminated soil outside the planed excavation area (Figures 2-1 and 5-2) raises concerns on the ability of proposed post-excavation sampling to characterize the horizontal extent of contamination. In order to improve horizontal characterization of PCB contamination, DTSC request that an additional post-excavation sampling to a depth of 10 feet occur 2-3 feet beyond a sidewall that meet the removal action goals. Field immunoassay analysis (with 10 percent laboratory confirmation) is acceptable for this sampling. Please propose a sampling methodology that is consistent with DTSC's request.

13. Section 5.14 Post-Excavation Sampling

The Navy proposes one randomly located bottom-of-excavation confirmation sampling for each 50x50 grid. This is one sample for every 2500 square feet. This is too large an area and is inconsistent with confirmation sampling conducted during Parcel B remediation. Please change the grid to a 25 to 25 foot grid and consider 3 point composites instead of discrete samples.


NO

14. Section 5.14 Post-Excavation Sampling

Please provide more information on the following items:

- Explain how 'random' locations every 50 linear feet will be selected. Does 'random' apply to the depth of the sample?
- Section 5.14 states that post-excavations will be sampled along the western sidewall where practicable. In Appendix A, page 4-3 it states that samples will not be collected from the western sidewall. DTSC requests that samples be collected from the western sidewall.
- Explain why discrete samples in lieu of composites (e.g., 3-point composites) are proposed for post-excavation confirmation samples.
- Please confirm that if the excavation extends below three feet, additional sidewall samples will be collected.

- Please confirm that if a lateral 5 foot step-out is required that the entire 50 foot length will be included in the 5 foot step-out.
- Please include organotin as an analyte for sidewall samples.
- Please include instructions for field crew to collect additional biased samples if visual observations (or odor, field readings, etc.) indicate contamination.

15. Section 5.15 Backfill Placement and Compaction (and Appendix A, Section 4.5  
Backfill will consist of Bay Area Rapid Transport (BART) material which has been  
"certified clean by the DON [Department of Navy]", as well as other imported  
materials. More information is requested on the DON's certification. Please include,  
or send to DTSC, analytical results for BART (and other) materials. Also, four  
randomly located material samples from each imported source material may not  
meet DTSC recommendations for confirming imported source material. DTSC  
guidelines are found at   
[http://www.dtsc.ca.gov/PolicyAndProcedures/Schools/SMP\\_FS\\_Cleanfill-  
Schools.pdf](http://www.dtsc.ca.gov/PolicyAndProcedures/Schools/SMP_FS_Cleanfill-Schools.pdf). When reporting backfill sampling results please include volumes,  
source areas, number of samples and results.

16. Section 8.4.1.2 Air Emissions

Controlling and monitoring air emissions are important aspects of this removal  
action. Please provide a dust control and air monitoring plan that comply with the  
Clean Air Act excavation requirements and the Bay Area Air Quality Management  
District Regulations. Because of the proximity of the excavation to the landfill and  
the history of the site as a waste oil disposal area, please include monitoring for  
volatile organic compounds (VOCs), methane and other constituents as appropriate.  
Please include specific California Air Resources Board (CARB) requirements with  
respect to air monitoring for asbestos and dust.

17. Section 8.4.1.2 Air Emissions

Please describe the wind parameters at which excavation activities will cease.  
DTSC request that the BRAC Cleanup Team agree to these parameters prior to  
beginning excavation.

18. Health and Safety Plan

Please include a Health and Safety Plan.

## Department of Health Services (DHS) Review

Activity: Review of *Draft Project Work Plan, PCB Hot Spot Soil Excavation Site, Parcels E and E-2, Hunters Point Shipyard, San Francisco, CA*, dated February 25, 2005

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### General Comments:

1. It is not clear in this draft document if the Navy intends to release this site for unrestricted use or to keep this site with federal ownership and oversight. If the Navy does intend to release this site for unrestricted use and needs to show that this removal action cleaned the site to as low as reasonably achievable (ALARA) and any residual contamination to average concentrations that when modeled would not exceed a dose of 25 millirem per year (mrem/year), then the cleanup criteria (See Soil Remedial Objectives on Table 3-2) need to reflect these values.

It is not apparent from previous submittals from Navy sites that a residual concentration of 1 picocurie per gram (pCi/g) radium-226 (Ra-226) would be equivalent to less than 25 mrem/year. There may also be a need to show how the unity rule or sum of fractions rule would be used, since there are multiple contaminants of concern. These issues should be resolved before remediated areas are backfilled and/or a final status survey commences, including a confirmation survey and sampling is warranted by DHS.

2. If the Navy plans to dispose of any materials in a California facility, they should contact the agency that has jurisdiction and can explain the moratorium that has been placed on these facilities regarding radiation. Clarification on this issue should be obtained from the State Water Resources Control Board, who has been given authority under this moratorium.

### Specific Comments:

1. Page viii: Typographical error found for KeV. Should be kiloelectron volts.
2. Page 3-4, Section 3.5: Radiological Remedial Goals (RRO) need to be evaluated to ensure that when modeled the dose would not exceed 25 millirem per year (mrem/year). See General Comment 1 above.
3. Page 4-4, Sections 4.71 and 4.72: It is not apparent how the proposed investigation level of "3 sigma of the mean background area level" will be able to discern cesium-137 (Cs-137) values less than 0.13 pCi/g, strontium-90 (Sr-90), and Ra-226 values less than the Nuclear Regulatory Commission's (NRC) soil screening value of 0.6 pCi/g. Please show how investigation levels correlate to release criteria.

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4. Page 4-6, Section 4.8: What are the minimum detection levels for discrete sources or concentrations of the radionuclides of concern with the instruments and methods used for scanning?
5. Page 4-17, Section 4.11.2.2: Scanning or stationary measurements of soil will not be adequate for DHS to conclude that soil could be released for unrestricted use. DHS will need to see soil analysis of samples collected using the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) or similar guidance showing that the residual contamination does not exceed 25 mrem/year after ALARA has been demonstrated.
6. Page 4-14, Section 4.9.6: The derived concentration guideline level (DCGL) should be added to the Abbreviations and Acronyms list. DCGLs should be approved by the regulatory agencies before work commences.
7. Pages 4-14 and 4-15, Section 4.9.6: If the Navy intends to request an unrestricted release for this site, then the DCGLs and RROs need to reflect a dose not to exceed 25 mrem/year. The NRC's soil screening values show 0.6 pCi/g as equivalent to 25 mrem/year. See General Comment 1.
8. Page 4-17, Sections 4.11.1 and 4.11.2.1: Please explain in the document how measuring surface alpha/beta radiation compares to solid samples, how solid samples are collected and analyzed for comparison, and how this method works when measuring potentially contaminated soil surfaces. Is this method only to be used to determine the variability of the background area?
9. Page 5-4, Section 5.7: See Specific Comment 3 above.
10. Page 5-8, Section 5.10: What is the conceptual model being used for this site? Is there any historical information regarding the disposal (surface or burial) of the chemicals or radioactive materials at this site or the time of these disposals?
11. Page 5-10, Section 5.13: What are the minimum detection levels for discrete sources or concentrations of the radionuclides of concern with the instruments and methods used for scanning? Please explain in the document how these were estimated.
12. Page 5-13, Section 5.13.3: How will the strontium-90 (Sr-90) debris and/or soil contamination be detected with the field instrumentation?



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13. Page 5-13, Section 5.13.4: What are the detection limits of the instrumentation for each of the radionuclides of concern? Will the Sr-90 be detectable with the beta detector?
14. Page 5-14, Section 5.13.4.2: It appears that the selection of samples for laboratory analysis for strontium-90 is being based on whether Cs-137 is detected. What is the basis for correlation between Cs-137 being found and the presence of Sr-90? DHS will use soil/solid sample analysis results to determine if a site can be released for unrestricted use.
15. Page 5-16, Section 5.15: See General Comment 1 and Specific Comments 15 and 16 regarding DHS data review, confirmation surveying and sampling before backfilling.
16. Page 8-8, Section 8.6.2.2: DHS requests that laboratory analysis data be provided for concurrence that the site meets the DCGLs needed for unrestricted release. DHS may also request access to the site to perform a confirmation survey and sample collection before this site commences with backfilling and site restoration. See General Comment 1.
17. Table 3-2: DHS requires that doses from residual contamination not exceed 25 mrem/year after ALARA has been demonstrated. The NRC screening value equivalent to 25 mrem/year is set at 0.6 pCi/g for Ra-226 in soil.
18. Appendix A, Sampling and Analysis Plan, Pages A.1-2 and A.1-3, Section 1.1: See General Comment 1 and Specific Comment 5.
19. Appendix A, Sampling and Analysis Plan, Page A.1-2: Typographical error found in fourth bullet text, it has "secreening" instead of "screening."
20. Appendix A, Page A.11-2, Section 11.1.2: The Navy should ask the laboratory to provide all analytical results generated from gamma analysis of soil, not just the radionuclides of concern.
21. Appendix A, Table A.8-2: See General Comment 1 regarding the RROs and cleanup criteria/goals for the radionuclides of concern.
22. Attachment 1, HPO-Tt-009, Page 6 of 10, Section 6.2.2: There should be a mechanism or plan to address how samples will be collected to ensure that samples are adequate in number so that they are representative of the areas (e.g., lift, stockpile, remaining soil in excavation site after excavation, etc.)

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being sampled. The basis for representative sampling should be explained in the document.

23. Appendix B, Page B.5-2, Sections 5.2, 5.3 and 5.5: See General Comment 1 and Specific Comments 7 and 16 regarding issues to be resolved and DHS confirmation survey and/or sampling before backfilling.